

SEARCH REQUEST FORM

Requestor's
Name:

Date:

Cephia Toomer

Serial
Number:

08/786360

Phone: 308-2509

Art Unit: 1111

Search Topic:

Please write a detailed statement of search topic. Describe specifically as possible the subject matter to be searched. Define any terms that may have a special meaning. Give examples or relevant citations, authors keywords, etc., if known. For sequences, please attach a copy of the sequence. You may include a copy of the broadest and/or most relevant claim(s).

Please search a composite comprising metal bonded chromium oxide, metal fluoride and optionally, one or more low temperature lubricating metals.

- (a) Metal bonding comprises a metal alloy containing Cr and at least one of Ni, Co or a mixture thereof. Nickel, Cobalt, Superalloy
- (b) Metal fluoride is selected from Group IA alkali earth metal, Group IIA alkaline earth metal
- (c) Lubricating metal is selected Ag, Au, Pt, Pd, Rh, Cu or mix thereof.

Dellacorte, Christopher

STAFF USE ONLY

Date completed:

Searcher:

Terminal time:

Elapsed time:

CPU time:

Total time:

Number of Searches:

Number of Databases:

Search Site

STIC

CM-I

Pre-S

N.A. Sequence

A.A. Sequence

Structure (2)

Bibliographic

Vendors

IG Suite

STIN

Dialog

APS

Geninfo

SDC

DARC/Ques

Other

(author search)

=> d 13 5,17 all

L3 ANSWER 5 OF 20 HCPLUS COPYRIGHT 1997 ACS
AN 1994:661576 HCPLUS
DN 121:261576
TI The friction and wear of ceramic/ceramic and ceramic/metal combinations in sliding contact
AU Sliney, Harold E.; Dellacorte, Christopher
CS NASA Lewis Research Center, Cleveland, OH, USA
SO Lubr. Eng. (1994), 50(7), 571-6
CODEN: LUENAG; ISSN: 0024-7154
DT Journal
LA English
CC 57-2 (Ceramics)
Section cross-reference(s): 56
AB The tribol. characteristics of ceramics sliding on ceramics are compared to those of ceramics sliding on an Inconel 718 Ni superalloy. The friction and wear of oxide ceramics and Si-based ceramics in air at 25-1200.degree. were measured for a hemispherically tipped pin in a flat sliding contact geometry. In general, esp. at high temps., the friction and wear were lower for ceramic/metal combinations than for ceramic/ceramic combinations. The better tribol. performance for ceramic/metal combinations is attributed primarily to lubricating nature of the oxidized alloy surface.
ST friction wear ceramic ceramic couple; nickel superalloy ceramic couple friction
IT Ceramic materials and wares
(friction and wear of ceramic/ceramic and ceramic/nickel superalloy couples in sliding contact)
IT Crystal whiskers
(silicon carbide; friction and wear of nickel superalloy against alumina matrix composites contg.)
IT Friction
(wear, of ceramic/ceramic and ceramic/nickel superalloy couples in sliding contact)
IT 409-21-2, Silicon monocarbide, properties 1302-93-8, Mullite 1344-28-1, Alumina, properties 12606-10-9, Inconel 718 (friction and wear of ceramic/ceramic and ceramic/nickel superalloy couples in sliding contact)
IT 1314-23-4, Zirconia, properties
(partially stabilized; friction and wear of ceramic/ceramic and ceramic/nickel superalloy couples in sliding contact)
IT 12033-89-5, Silicon nitride, properties
(yttria-contg.; friction and wear of ceramic/ceramic and ceramic/nickel superalloy couples in sliding contact)

L3 ANSWER 17 OF 20 HCPLUS COPYRIGHT 1997 ACS
AN 1991:497437 HCPLUS
DN 115:97437
TI Sintered carbide-fluoride-metal **composites** for self-lubricating parts operating at high temperature
IN Sliney, Harold E.; Dellacorte, Christopher
PA United States National Aeronautics and Space Administration, USA
SO U. S. Pat. Appl., 10 pp. Avail. NTIS Order No. PAT-APPL-7-571 058.
CODEN: XAXXAV
PI US 571058 A0 910601
AI US 90-571058 900823
DT Patent
LA English
CC 56-4 (Nonferrous Metals and Alloys)
AB Sintered antifriction **composites** are manufd. from the

powder mixts. contg. Cr carbide 20-70, soft precious metal (esp. Au or Ag) 5-50, metal fluoride 5-20, and metal or alloy binder 20-60%. The sintered **composites** are suitable for bearings, bushings, valve seats, gears, and similar machine parts typically operating at 25-900.degree., esp. in an oxidizing or reducing atm. Preforms from the powder mixts. can be pressed, sintered at 900-1200.degree., and optionally densified.

ST antifriction sintered **composite**; chromium carbide
composite antifriction; carbide **composite**
antifriction; gold sintered **composite** antifriction; silver
sintered **composite** antifriction; fluoride sintered
composite antifriction

IT Friction
(of sintered alloy **composite**, temp. effect on, in dry
sliding on superalloy)

IT Bearings
Bushings
Gears
(sintered **composites** for, with carbide and fluoride)

IT Fluorides, uses and miscellaneous
(sintered **composites** with, for antifriction service at
high temp.)

IT Antifriction materials
(sintered, **composites**, for high-temp. service, manuf.
of carbide-contg.)

IT Engines
(valves, sintered **composites**, with carbide and
fluoride)

IT Cobalt alloy, base
Nickel alloy, base
(sintered **composites** with, for antifriction service at
high temp.)

IT 7440-22-4, Silver, uses and miscellaneous 7440-57-5, Gold, uses
and miscellaneous 11130-49-7, Chromium carbide 12069-85-1,
Hafnium carbide (HfC)
(sintered **composites** with, for antifriction service at
high temp.)